



#12 Response
9/30/01
M. Savage

S/N 09/600,203

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Ogata et al.	Examiner:	M. Savage
Serial No.:	09/600,203	Group Art Unit:	1723
Filed:	August 9, 2000	Docket No.:	13409.1USWO
Title:	FILTER CARTRIDGE		

CERTIFICATE UNDER 37 CFR 1.10:

"Express Mail" mailing label number: EL913562168US

Date of Deposit: 9-25-01

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By: Omesh Singh
Name: Omesh Singh

RESPONSE

Commissioner for Patents
Washington, D.C. 20231

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SEP 28 2001

TC 1700

Dear Sir:

The following comments are presented in response to the Office Action mailed June 25, 2001. Favorable reconsideration is respectfully requested.

Applicants respectfully traverse the rejection of claims 1-5, 10 and 11 under 35 USC § 103(a) as unpatentable over JP 4-45811 in view of EP 466 381. The claimed invention is directed to a filter cartridge that is made from a long fiber nonwoven thermoplastic fabric. Neither of the cited references describe or suggest the claimed invention.

The Examiner notes correctly that JP 4-45811 fails to describe long thermoplastic fibers having fiber intersections that are at least partially adhered. Indeed, JP 4-45811 describes a filter material similar to that found in Comparative Example 3 of the present specification, which utilizes a filter containing small fibers of polypropylene and high density polyethylene. As seen at page 46 of the instant specification, this filter material had a substantially greater (about an order of magnitude) pressure drop and a much shorter effective life when compared to the filter of Example 11. Both filters were prepared according to the process of Example 4.

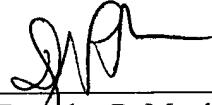
EP 466 381 is relied upon to suggest the use of long thermoplastic fibers having fiber intersections that are at least partially adhered. However, EP 466 381 suggests the use of melt-blown fibers, which simply are not equivalent to the claimed long fibers. As noted for example at column 12 of U.S. Patent No. 4,622,259 (copy attached), the average length of melt-blown fibers produced by prior art processes is about 10 cm. These are not long fibers.

Therefore, EP 466 381 cannot be considered as remedying the noted shortcomings of JP 4-45811. Indeed, the attached YAMAGUCHI Declaration describes experimental data showing that the melt-blown fibers described by EP 466 381 produce a filter that has significantly reduced performance when compared to the filters of the claimed invention. The results are summarized in the Table found at page 4 of the Declaration. The filters of the claimed invention have less of a pressure drop and a greater life span than do the filters produced using the melt-blown fibers of EP 466 381. The melt-blown fibers (see Comparative Example A) also have a poorer bubbling performance and are more subject to fiber falling. Thus, EP 466 381 fails to remedy the noted shortcomings of JP 4-45811 and therefore the rejection should be withdrawn.

Applicants respectfully traverse the rejection of claims 7-9 under 35 USC § 103(a) as unpatentable over JP 4-45811 in view of EP 466 381, and further in view of JP 1-115423. JP 4-45811 and EP 466 381 are distinguished above as failing to describe or suggest a filter cartridge that is made from a long fiber nonwoven thermoplastic fabric. JP 1-115423 is relied upon to suggest pleating. Even if it does, which is not being conceded, this reference fails to remedy the noted shortcomings of the other references. Thus, the rejection should be withdrawn.

In view of the comments presented herein, favorable reconsideration in the form of a Notice of Allowance is respectfully requested.

Respectfully submitted,


Dated: September 25, 2001

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